

REMARKS

Claims 1-26 remain pending in the application. Claims 1-26 are amended, and claims 27-30 are cancelled. Reconsideration of the rejection and allowance of the pending application in view of the following remarks are respectfully requested.

As an initial matter, Applicants note that the Examiner has not confirmed that she has considered the references cited in the Information Disclosure Statement (IDS) which was filed on August 7, 2008. Applicants request that the Examiner confirm that she has considered these references by initialing a copy of the PTO-1449 Form which was included with the IDS, and forwarding the initialed copy of the form to Applicants.

In the Office Action, the Examiner provisionally rejects claims 5-7, 10-13, 15, 17, 20 and 23 on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 21, 23-27, 29-31 and 33 of U.S. Patent Application No. 10/567,572. Applicants respectfully traverse the rejections for at least the following reasons.

According to section 804(I)(B)(1) of the M.P.E.P., if two copending applications are filed on the same day, the Examiner should determine which application claims the base invention and which application claims the improvement (added limitations), and should withdraw the obviousness-type double patenting rejection in the base application without a terminal disclaimer.

Applicants submit that the present application claims a base invention, and that U.S. Patent Application No. 10/567,572 claims an improvement. In this regard, independent claims 21, 26, 31 of U.S. Patent Application No. 10/567,572 each recite an additional limitation relating to the transmission of a collision acknowledgement in a fourth time slot. Applicants respectfully submit that these additional limitations are non-obvious differences between the claimed inventions of the present application, and those of U.S. Patent Application No. 10/567,572. For

at least this reason, Applicants submit that the claims of U.S. Patent Application No. 10/567,572 are patentably distinct from those of the present application, and request that the Examiner withdraw the double patenting rejections.

In the Office Action, the Examiner rejects claims 8 and 9 under 35 U.S.C. §112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter regarded as the invention. Applicants have amended claims 8 and 9 to address the issues noted by the Examiner, and request that the Examiner withdraw the rejections under 35 U.S.C. §112, second paragraph.

In the Office Action, the Examiner rejects claim 1 under 35 U.S.C. §102(b) as being anticipated by Hottinen et al. (U.S. Patent Application Publication No. 2002/0105961), and rejects claim 2 under 35 U.S.C. §103(a) as being unpatentable over Hottinen et al.

Applicants' claim 1, as currently amended, recites a communications method which includes, inter alia, transmitting data in a first time slot, and either transmitting a first acknowledgement state in a second time slot after the first time slot, or transmitting a second acknowledgement state in a third time slot after the second time slot. The first and second acknowledgement states are either a positive acknowledge and a negative acknowledge, respectively, or a negative acknowledge and a positive acknowledge, respectively.

Hottinen et al. relates to a transmit diversity communications method for performing channel estimation between a base station BS 10 having multiple antennas and a mobile station MS 20. According to Hottinen's method, the MS 20 transmits to the BS 10 first feedback information relating to a channel estimate in two successive time slots (slots S1), and transmits second feedback information relating to a rotated channel estimate in two following successive time slots (slots S2). See, e.g., paragraph [0070] of Hottinen et al. The feedback information is

used to estimate appropriate channel weights in a transmit diversity system. See, e.g., paragraph [0075] of Hottinen et al.

Applicants respectfully submit that Hottinen's feedback information is not an acknowledgement state. Rather, Hottinen's feedback information merely indicates a phase difference of a channel estimate and a phase difference of a rotated channel estimate. See, e.g., Fig. 4 and paragraphs [0070] and [0071] of Hottinen et al.

Applicants note that on page 8 of the Office Action, the Examiner asserts that the terms positive and negative acknowledgement are extremely well known in the art, and asserts that it would have been obvious to modify Hottinen et al. because these terms are known to be widely used in the industry. Applicants respectfully submit that the mere fact that the terms "positive acknowledge" or "negative acknowledge" are known in the art provides no motivation whatsoever to one of ordinary skill in the art to modify Hottinen's feedback information to be a positive or negative acknowledge. Rather than indicating whether or not the MS 20 has successfully received data from the BS 10, Hottinen's feedback information merely provides data to the BS 10 for estimating a channel weight.

Thus, Applicants submit that Hottinen et al. fails to disclose or suggest a communications method which includes transmitting data in a first time slot, and either transmitting a first acknowledgement state in a second time slot after the first time slot, or transmitting a second acknowledgement state in a third time slot after the second time slot, where the first and second acknowledgement states are either a positive acknowledge and a negative acknowledge, respectively, or a negative acknowledge and a positive acknowledge, respectively, as recited in Applicants' amended claim 1.

For at least these reasons, Applicants submit that Hottinen et al. does not anticipate or render obvious the inventions recited in Applicants' claims 1 and 2, and request that the Examiner withdraw the rejections under 35 U.S.C. §§102(b) and 103(a).

In the Office Action, the Examiner rejects claim 3 under 35 U.S.C. §103(a) as being unpatentable over Hottinen et al. in view of You et al. (U.S. Patent No. 5,570,355), and rejects claim 4 under 35 U.S.C. §103(a) as being unpatentable over Hottinen et al. in view of Hass et al. (U.S. Patent Application Publication No. 2004/0025018). Applicants respectfully submit that You et al. and Hass et al. fail to overcome the above-noted deficiencies of Hottinen et al. with respect to independent claim 1. Thus, Applicants request that the Examiner withdraw the rejections of claims 3 and 4, in view of their dependency from claim 1.

In the Office Action, the Examiner rejects claims 5, 11, 12 and 17 under 35 U.S.C. §103(a) as being unpatentable over Farley (U.S. Patent Application Publication No. 2002/0101839), and rejects claims 13, 14, 18 and 19 under 35 U.S.C. §103(a) as being unpatentable over Farley et al.

Applicants' independent claim 5, as currently amended, recites a radio communication system including a transceiver/transmitter and at least two transceiver/receivers. The transceiver/transmitter transmits data in a first time slot. Upon receipt of the data, each of the at least two transceiver/receivers transmit either a first acknowledgement state in a second time slot, after the first time slot, or a second acknowledgement state in a third time slot after the second time slot. The first and second acknowledgement states are either a positive acknowledge and a negative acknowledge, respectively, or a negative acknowledge and a positive acknowledge, respectively.

Applicants' independent claim 11, as currently amended, recites a transceiver/receiver for use in a radio communication system including at least one transceiver/transmitter. Upon receiving a data packet in a first time slot from at least one of the transceiver/transmitters, the transceiver/receiver either transmits a first acknowledgement state in a second time slot, after the first time slot, or transmits a second acknowledgement state in a third time slot, after the second time slot. The first and second acknowledgement states are either a positive acknowledge and a negative acknowledge, respectively, or a negative acknowledge and a positive acknowledge, respectively.

Applicants' independent claim 17, as currently amended, recites a transceiver/transmitter for use in a radio communication system including at least one transceiver/receiver. The transceiver/transmitter transmits a data packet in a first time slot, and receives one or both of a first acknowledgement state in a second time slot after the first time slot from at least one of the transceiver/receivers and a second acknowledgement state in a third time slot after the second time slot from at least one of the transceiver/receivers. The first and second acknowledgement states are either a positive acknowledge and a negative acknowledge, respectively, and a negative acknowledge and a positive acknowledge, respectively.

Farley et al. is directed to a communication system 10 in which subscriber units 14 use a shared reverse link channel labeled a joint acknowledgement channel (JACK) to communicate acknowledge information to a base station 20. See, e.g., paragraphs [0057] and [0079] of Farley et al. Farley et al. teaches that the JACK channel is time-slotted, and each subscriber unit 14 transmits information to the base station 20 in an assigned time slot so that the base station 20 can identify a subscriber unit 14 which sent a message. See, e.g., paragraphs [0057] and [0112] of Farley et al. That is, Farley et al. teaches that multiple acknowledgement messages can be

sent over the JACK channel, but that each message can be associated with a particular subscriber unit 14 based on the slot the message is sent in.

Applicants submit that Farley et al. merely teaches that multiple acknowledgement messages can be included in a time slotted channel. Farley et al. fails to disclose or suggest that the subscriber units 14 transmit a first acknowledgement state in one time slot, and transmit a second acknowledgement state in a subsequent time slot.

Applicants note that on page 16 of the Office Action, the Examiner asserts that the terms positive and negative acknowledgement are extremely well known in the art, and asserts that it would have been obvious to modify Farley et al. because these terms are known to be widely used in the industry. Applicants submit that the mere fact that the terms “positive acknowledge” or “negative acknowledge” are known in the art provides no motivation at all to one of ordinary skill in the art to modify Farley et al., such that a positive acknowledge is transmitted in one time slot of the JACK channel, and a negative acknowledge is transmitted in a subsequent time slot of the JACK channel, or vice versa.

For at least these reasons, Applicants submit that Farley et al. does not anticipate or render obvious the inventions recited in Applicants’ claims 5, 11-14 and 17-19, and request that the Examiner withdraw the rejections under 35 U.S.C. §§102(b) and 103(a).

In the Office Action, the Examiner rejects claim 6 as being unpatentable over Hottinen et al.; rejects claims 7 and 8 under 35 U.S.C. §103(a) as being unpatentable over Hottinen et al. in view of You et al.; rejects claim 9 under 35 U.S.C. §103(a) as being unpatentable over Hottinen et al. in view of You et al. and Hass et al.; and rejects claims 15, 16 and 20 under 35 U.S.C. §103(a) as being unpatentable over Farley et al. in view of Zhao et al. (article titled “New Go-Back-N ARQ Protocols for Point-to-Multipoint Communications”). Applicants respectfully

submit that Hottinen et al., You et al., Hass et al., and Zhao et al. fail to overcome the above-noted deficiencies of Farley et al. with respect to independent claims 5, 11 and 17. Thus, Applicants request that the Examiner withdraw the rejections of claims 6-10, 15, 16 and 20, in view of their dependency from claims 5, 11 and 17.

In the Office Action, the Examiner rejects claims 21, 23 and 25 under 35 U.S.C. §103(a) as being unpatentable over Black et al. (U.S. Patent Application Publication No. 2004/0081124) in view of Zhao et al.

Applicants' independent claim 21, as currently amended, recites a method of disseminating data to be shared with at least two transceiver/receivers which includes, *inter alia*, transmitting the data to the at least two transceiver/receivers, upon unsuccessfully receiving the data by at least one of the at least two transceiver/receivers, transmitting negative acknowledge data, retransmitting the data, and replacing the data received by each of the at least two transceiver/receivers with the retransmitted data in each of the at least two transceiver/receivers.

Black et al. is directed to a reverse link ARQ system between an access network AN and a single access terminal AT. See, e.g., paragraphs [0004], [0005] and [0019] of Black et al.

Applicants respectfully submit that data which is transmitted by Black's access network AN is transmitted to only a single access terminal AT, and is not shared with at least two transceiver/receivers. Accordingly, Black et al. merely teaches that if a single access terminal AT send a negative acknowledge (NAK) message, data is retransmitted to *only* this access terminal AT by the access network AN, and data replacement occurs *only* at this access terminal AT. See, e.g., paragraphs [0019] and [0020] of Black et al.

Applicants submit that Zhao et al. fails to overcome these deficiencies of Black et al. Thus, Applicants submit that the combined teachings of Black et al. and Zhao et al. fail to

disclose or suggest a method of disseminating data to be shared with at least two transceiver/receivers which includes transmitting the data to the *at least two* transceiver/receivers, upon unsuccessfully receiving the data by at least one of the *at least two* transceiver/receivers, transmitting negative acknowledge data, retransmitting the data, and replacing the data received by *each of the at least two* transceiver/receivers with the retransmitted data *in each of the at least two* transceiver/receivers.

For at least these reasons, Applicants submit that Black et al. and Zhao et al. do not render obvious the inventions recited in Applicants' claims 21, 23 and 25, and request that the Examiner withdraw the rejections under 35 U.S.C. § 103(a).

In the Office Action, the Examiner rejects claim 22 under 35 U.S.C. §103(a) as being unpatentable over Farley et al. in view of Zhao et al., and rejects claim 24 under 35 U.S.C. §103(a) as being unpatentable over Black et al. in view of Zhao et al. and Farley et al. Applicants respectfully submit that Farley et al. fail to overcome the above-noted deficiencies of Black et al. and Zhao et al. with respect to independent claim 21. Thus, Applicants request that the Examiner withdraw the rejections of claims 22 and 24, in view of their dependency from claim 21.

In the Office Action, the Examiner indicates that claim 10 would be allowable if rewritten to overcome the rejection under 35 U.S.C. §112, 2<sup>nd</sup> paragraph and to include all of the limitations of the base claim and any intervening claims. The Examiner also objects to claim 26 as being dependent upon a rejected base claim, but indicates that this claim would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Applicants wish to thank the Examiner for indicating that claims 10 and 26 include allowable subject matter. However, Applicants submit that claims 10 and 26 are in condition for allowance in their present form, as claims 8 and 9 have been amended to overcome the rejections under 35 U.S.C. §112, 2<sup>nd</sup> paragraph, and independent claims 5 and 21, from which claims 10 and 26 respectively depend, are submitted to be in condition for allowance for at least the reasons discussed above. Accordingly, Applicants respectfully request that the Examiner allow claims 10 and 26 in their present form.

Based on the above, it is respectfully submitted that this application is in condition for allowance, and a Notice of Allowance is respectfully requested.

**SUMMARY AND CONCLUSION**

Reconsideration of the outstanding Office Action, and allowance of the present application and all of the claims therein are respectfully requested and believed to be appropriate. Applicants have made a sincere effort to place the present invention in condition for allowance and believe that they have done so.

Any amendments to the claims which have been made in this amendment, and which have not been specifically noted to overcome a rejection based upon the prior art, should be considered to have been made for a purpose unrelated to patentability, and no estoppel should be deemed to attach thereto.

Should an extension of time be necessary to maintain the pendency of this application, including any extensions of time required to place the application in condition for allowance by an Examiner's Amendment, the Commissioner is hereby authorized to charge any additional fee to Deposit Account No. 19-0089.

Should the Examiner have any questions or comments regarding this response, or the present application, the Examiner is invited to contact the undersigned at the below-listed telephone number.

Respectfully submitted,  
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